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Appl. No. 10/632,004
Amdt. dated August 8, 2006
Reply to Office Action of April 11, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A disk recording apparatus for recording data on an optical disk composed to have a wobble PM (Phase Modulation) format, comprising:

means for detecting a first synchronous signal to be modulated into a reproduced wobble signal and indicating the head of a first data component unit and first address information contained in data composition;

means for detecting a second synchronous signal to be modulated into a reproduced track signal and indicating the head of a second data component unit and second address information contained in data composition;

first selecting means for selecting a detection timing of said first synchronous signal or a detection timing of said second synchronous signal or second address information;

second selecting means for selecting said first or second detection address; and control means for specifying a linking position in synchronous to wobble

positions on said disk, based on a selected detection timing sent from said first selecting means and a selected detection address sent from said selecting means and controlling a recording operation for a recording target track section.

2. (Original) A disk recording method for recording data on an optical disk composed to have a wobble PM (Phase Modulation) format, comprising the steps of:

detecting a first synchronous signal to be modulated into a reproduced wobble signal and indicating the head of a first data component unit and first address information contained in data composition;

detecting a second synchronous signal to be modulated into a reproduced track signal and indicating the head of a second data component unit and second address information contained in data composition;

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selecting a detection timing of said first synchronous signal or a detection timing of a second synchronous signal or second address information;

selecting said first or second detection address; and

specifying a linking position in synchronous to wobble positions on said disk, based on said selected detection timing and said selected detection address, for recording data onto a recording target track sector.

3. (Original) A disk recording method as claimed in claim 2, wherein said selected detection timing and said selected detection address is any one of a first combination of said first synchronous signal and said first address information, a second combination of said first synchronous signal and said second address information, and a third combination of the detection timing of said second synchronous signal or said second address information and said second address information, and

the process is executed to specify a linking position in synchronous to wobble positions on said disk, based on the selected one of said first, second and third combinations and thereby control a recording operation for a recording target track sector.

4. (Original) A disk recording method as claimed in claim 3, wherein the selection of said first, second and third combinations, said first combination is selected if said first synchronous signal is detected and said first address information is detected, said second combination is selected if said first synchronous signal is detected and only said second address information is selected, and said third combination is selected if no first synchronous signal is detected and said second address information is detected.

5. (Original) A disk recording method of recording data onto an optical disk composed to have a wobble PM (Phase Modulation) format, comprising the steps of:

detecting a synchronous signal to be modulated into a reproduced wobble signal and indicating the head of a first data component unit;

detecting an address to be modulated into a reproduced track signal and contained in a second data component unit; and

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specifying a linking position in synchronous to wobble positions on said disk, based on the detection timing of said synchronous signal and said detection address and thereby controlling a recording operation for a recording target track sector.

6. (Original) A disk recording method of recording data onto an optical disk composed to have a wobble PM (Phase Modulation) format, comprising the steps of:

detecting a synchronous signal to be modulated into a reproduced track signal and indicating the head of a data component unit and detecting an address contained in data composition; and

specifying a linking position in synchronous to wobble positions on said disk, based on the detection timing of said synchronous signal or address and said detected address and thereby controlling a recording operation for a recording target track sector.